

=> s monochloramine/cn

L1 1 MONOCHLORAMINE/CN

=> d ide can

LI ANSWER 1 OF 1 REGISTRY COPYRIGHT 2010 ACS on STN  
RN 10599-90-3 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Chloramide (CA INDEX NAME)  
OTHER NAMES:  
CN Chloramine  
CN Chloramine (inorganic compound)  
CN Chloroamine  
CN ExoStop  
CN Monochloramine  
CN Monochloramine (NH<sub>2</sub>Cl)  
CN Monochloroamine  
CN Monochloroammonia  
MF Cl H2 N  
CI COM  
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BIOSIS, BIOTECHNO, CA, CAPLUS,  
CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU,  
DETERM\*, DRUGU, EMBASE, GMELIN\*, HSDB\*, IFICDB, IFIPAT, IFIUDB,  
MEDLINE, MSDS-OHS, PIRA, PROMT, RTECS\*, TOXCENTER, ULIDAT, USPAT2,  
USPATFULL, USPATOLD  
(\*File contains numerically searchable property data)  
Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)

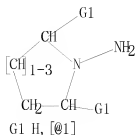
Cl-NH<sub>2</sub>

**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

1865 REFERENCES IN FILE CA (1907 TO DATE)  
20 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
1867 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 153:295098  
REFERENCE 2: 153:262296  
REFERENCE 3: 153:262142  
REFERENCE 4: 153:241142  
REFERENCE 5: 153:224660  
REFERENCE 6: 153:165572  
REFERENCE 7: 153:79433  
REFERENCE 8: 153:20118  
REFERENCE 9: 152:575252  
REFERENCE 10: 152:533634

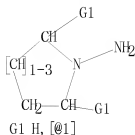
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Ak 1

Structure attributes must be viewed using STN Express query preparation.

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 L2 STR



Ak 1

Structure attributes must be viewed using STN Express query preparation.

L4 786 SEA FILE=REGISTRY SSS FUL L2

100.0% PROCESSED 195954 ITERATIONS  
 SEARCH TIME: 00.00.02

786 ANSWERS

=> d his

(FILE 'HOME' ENTERED AT 04:55:58 ON 12 SEP 2010)

FILE 'REGISTRY' ENTERED AT 04:56:12 ON 12 SEP 2010

E MONOCHLORAMINE/CN  
 L1 1 S MONOCHLORAMINE/CN  
 L2 STRUCTURE UPLOADED  
 L3 40 S L2  
 L4 786 S L2 FULL

=> fil capl  
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FILE COVERS 1907 - 12 Sep 2010 VOL 153 ISS 12  
FILE LAST UPDATED: 10 Sep 2010 (20100910/ED)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2010  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2010

CAPLUS now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2010.

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<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

'FIONA' IS DEFAULT FORMAT FOR 'CAPLUS' FILE

=> s 14

L5 1674 L4

=> s 11 and 15

1867 L1

L6 5 L1 AND L5

=> d 1-5 ibib iabs hitstr

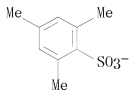
L6 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 2009:208970 CAPLUS  
TITLE: Product class 7: hydrazines and hydrazinium salts  
AUTHOR(S): Rademacher, P.  
CORPORATE SOURCE: Institut fuer Organische Chemie, Universitaet  
Duisburg-Essen, Essen, 45117, Germany  
SOURCE: Science of Synthesis (2009), Volume Date 2008, 40b,  
1133-1210  
CODEN: SSCYJ9  
PUBLISHER: Georg Thieme Verlag  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
ABSTRACT: Unavailable  
IT INDEXING IN PROGRESS  
IT ~~10599-90-3~~  
RL: CAT (Catalyst use); USES (Uses)  
RN 10599-90-3 CAPLUS  
CN Chloramide (CA INDEX NAME)

Cl-NH<sub>2</sub>

IT ~~42496-69-5P~~  
RL: SPN (Synthetic preparation); PREP (Preparation))  
RN 42496-69-5 CAPLUS  
CN Piperidinium, 1-amino-1-methyl-, 2,4,6-trimethylbenzenesulfonate (1:1)  
(CA INDEX NAME)

CM 1

CRN 46149-61-5  
CMF C9 H11 O3 S



CM 2

CRN 45632-94-8  
CMF C6 H15 N2



REFERENCE COUNT:

293 THERE ARE 293 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L6 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2005:549735 CAPLUS

DOCUMENT NUMBER: 143:77854

TITLE: Process for synthesis of derivatives of exocyclic  
cycloalkyl hydrazines and heterocycloalkyl hydrazines  
INVENTOR(S): Delalu, Henri; Colas, Duriche Cecile; Berthet,  
Jacques; Leurent, Philippe

PATENT ASSIGNEE(S): Isochem, Fr.; Centre National De La Recherche  
Scientifique CNRS; Universite Claude Bernard Lyon I  
SOURCE: Fr. Demande, 21 pp.

CODEN: FRXXBL

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2864081	A1	20050624	FR 2003-14795	20031217
FR 2864081	B1	20060428		
CA 2550080	A1	20050630	CA 2004-2550080	20041217
WO 2005058852	A1	20050630	WO 2004-FR3288	20041217
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1699770	A1	20060913	EP 2004-816423	20041217
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS				
CN 1894228	A	20070110	CN 2004-80037639	20041217
CN 100528853	C	20090819		
JP 2007514723	T	20070607	JP 2006-544502	20041217
IN 2006DN03450	A	20070831	IN 2006-DN3450	20060615
KR 2007022639	A	20070227	KR 2006-714401	20060718
US 20070249829	A1	20071025	US 2007-583284	20070523
PRIORITY APPLN. INFO.:			FR 2003-14795	A 20031217
			WO 2004-FR3288	W 20041217

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): CASREACT 143:77854; MARPAT 143:77854

## ABSTRACT:

The present invention relates to a process of synthesis of exocyclic cycloalkyl hydrazine derivs. and exocyclic heterocycloalkyl hydrazine derivs. The process includes stages of reacting a heterocyclic amine with monochloroamine in an alkaline medium at 30-60° and decomposing the solution containing the synthesized derivative in an organic phase and an aqueous phase by the adding anhydrous sodium hydroxide, whereas the starting amine which did not react is recovered and re-used directly, without addnl. treatment. The process of this invention thus allows obtaining cycloalkyl hydrazine derivs. or exocyclic heterocycloalkyl hydrazine derivs. with a lower cost in comparison to the other known processes.

IT 10599-90-3, Monochloroamine  
RL: RGT (Reagent); RACT (Reactant or reagent)  
(process for synthesis of derivs. of exocyclic cycloalkyl hydrazines  
and heterocycloalkyl hydrazines)  
RN 10599-90-3 CAPLUS  
CN Chloramide (CA INDEX NAME)

Cl-NH<sub>2</sub>

IT 2213-43-6P, N-Aminopiperidine  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(process for synthesis of derivs. of exocyclic cycloalkyl hydrazines  
and heterocycloalkyl hydrazines)  
RN 2213-43-6 CAPLUS  
CN 1-Piperidinamine (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



L6 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1985:617700 CAPLUS

DOCUMENT NUMBER: 103:217700

ORIGINAL REFERENCE NO.: 103:35085a, 35088a

TITLE: Syntheses of some N-substituted hydrazines by the anhydrous chloramine process

AUTHOR(S): Jain, S. R.; Chellappa, D.

CORPORATE SOURCE: Dep. Aerosp. Eng., Indian Inst. Sci., Bangalore, 560 012, India

SOURCE: Proceedings - Indian Academy of Sciences, Chemical Sciences (1985), 95(4), 381-9

CODEN: PIAADM; ISSN: 0253-4134

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 103:217700

ABSTRACT:

C1NH<sub>2</sub>, produced in the gas phase by the reaction of Cl<sub>2</sub> and NH<sub>3</sub>, reacts with various primary and secondary amines in nonaq. solvents in the presence of a fixed base to form the corresponding N-substituted hydrazines. The hydrazines synthesized include PhNHNH<sub>2</sub> [100-63-0], p-tolylhydrazine [539-44-6], H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>NHNH<sub>2</sub> [14478-61-6], N-aminopyrrolidine [16596-41-1], and N-aminopiperidine [2213-43-6]. Apparently, no hydrazine is formed when the reaction is carried out in the absence of fixed base. The effect of various factors, such as fixed-base concentration, amine/C1NH<sub>2</sub> ratio etc., on the overall yield of hydrazines was studied. A modified C1NH<sub>2</sub> gas generator giving improved yields is described. The optimum yield of C1NH<sub>2</sub> is dependent upon the ratio of Cl<sub>2</sub>, NH<sub>3</sub>, and N<sub>2</sub> taken, but is virtually independent of the reactor temperature

IT 2213-43-6P 16596-41-1P

RL: PREP (Preparation)

(preparation of, anhydrous chloramine process for)

RN 2213-43-6 CAPLUS

CN 1-Piperidinamine (CA INDEX NAME)



RN 16596-41-1 CAPLUS

CN 1-Pyrrolidinamine (CA INDEX NAME)

IT 10599-90-3P

RL: PREP (Preparation)

(preparation of, anhydrous process for)

RN 10599-90-3 CAPLUS  
CN Chloramide (CA INDEX NAME)

Cl-NH<sub>2</sub>

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD  
(3 CITINGS)

L6 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1968:495855 CAPLUS

DOCUMENT NUMBER: 69:95855

ORIGINAL REFERENCE NO.: 69:17914h,17915a

TITLE: Dialkyltriazanium salts. I. Reaction of  
2-dialkylamino-1,3,2-dioxaphospholanes and  
2-dialkylamino-1,3,2-dioxaphosphorinane with  
chloramide in the presence of ammonia

AUTHOR(S): Utvary, K.

CORPORATE SOURCE: Univ. of Florida, Gainesville, FL, USA

SOURCE: Monatshefte fuer Chemie (1968), 99(4), 1473-82

CODEN: MOCHAP

DOCUMENT TYPE: Journal

LANGUAGE: German

ABSTRACT:

2-(RR'N-Substituted)-1,3,2-dioxaphospholane [R = R' = Me; R = R' = Et; RR' = (CH<sub>2</sub>)<sub>4</sub>; RR' = (CH<sub>2</sub>)<sub>2</sub>; RR' = (CH<sub>2</sub>)<sub>2</sub>(CH<sub>2</sub>)<sub>2</sub>; R = Me, R' = cyclohexyl] treated with NH<sub>2</sub>Cl and NH<sub>3</sub> gave [(NH<sub>2</sub>)<sub>2</sub>NNR']<sup>+</sup>Cl<sup>-</sup> and a polymeric P compound. The mechanism of reaction is discussed. Similar reaction was shown by 2-dialkylaminophosphorinanes.

IT 13006-15-0P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 13006-15-0 CAPLUS

CN Pyrrolidinium, 1,1-diamino-, chloride (1:1) (CA INDEX NAME)



● Cl<sup>-</sup>

IT 10599-90-3

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with cyclic ethylene dialkyl phosphoramidites and with  
cyclic trimethylene dialkyl phosphoramidites)

RN 10599-90-3 CAPLUS

CN Chloramide (CA INDEX NAME)

Cl-NH<sub>2</sub>

L6 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2010 ACS on STN  
ACCESSION NUMBER: 1957:8727 CAPLUS  
DOCUMENT NUMBER: 51:8727  
ORIGINAL REFERENCE NO.: 51:1761g-h  
TITLE: Reactions of chloramine with anhydrous primary and  
secondary amines  
AUTHOR(S): Omietanski, Geo. M.; Kelmers, A. Donald; Shellman,  
Richard W.; Sisler, Harry H.  
CORPORATE SOURCE: Ohio State Univ., Columbus  
SOURCE: Journal of the American Chemical Society (1956), 78,  
3874-7  
CODEN: JACSAT; ISSN: 0002-7863  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
OTHER SOURCE(S): CASREACT 51:8727  
ABSTRACT:  
cf. C.A. 50, 13024f. NH<sub>2</sub>Cl reacts with anhydrous primary and secondary amines to  
form N-substituted hydrazines. The method was used to prepare Me-, Et-, iso-Pr,  
unsym, di-Me-, and unsym. di-iso-Pr hydrazines and N-aminopiperidine. NH<sub>2</sub>Cl  
reacts with Et<sub>2</sub>NH to form EtNHNH<sub>2</sub>. The mechanism of the reactions is  
discussed.

IT 2213-43-6P, Piperidine, 1-amino-  
RL: PREP (Preparation)  
(preparation from amines and NH<sub>2</sub>Cl)  
RN 2213-43-6 CAPLUS  
CN 1-Piperidinamine (CA INDEX NAME)



IT 10599-90-3, Chloramide  
(reaction with amines in nonaq. solvents)  
RN 10599-90-3 CAPLUS  
CN Chloramide (CA INDEX NAME)

Cl-NH<sub>2</sub>

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD  
(1 CITINGS)

=> d his full

(FILE 'HOME' ENTERED AT 04:55:58 ON 12 SEP 2010)

FILE 'REGISTRY' ENTERED AT 04:56:12 ON 12 SEP 2010

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L*** DEL      4 S E3-E7
              D 1-4 IDE CAN
L1           1 SEA ABB=ON PLU=ON MONOCHLORAMINE/CN
              D IDE CAN
L2           STRUCTURE UPLOADED
              D L2
L3           40 SEA SSS SAM L2
L4           786 SEA SSS FUL L2
              D QUE L4 STAT
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FILE 'CAPLUS' ENTERED AT 05:01:40 ON 12 SEP 2010

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L5          1674 SEA ABB=ON PLU=ON L4
L6           5 SEA ABB=ON PLU=ON L1 AND L5
              D 1-5 IBIB IABS HITSTR
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FILE HOME

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 9 SEP 2010 HIGHEST RN 1240463-09-5  
DICTIONARY FILE UPDATES: 9 SEP 2010 HIGHEST RN 1240463-09-5

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<http://www.cas.org/support/stngen/stdoc/properties.html>

FILE CAPLUS

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FILE COVERS 1907 - 12 Sep 2010 VOL 153 ISS 12  
FILE LAST UPDATED: 10 Sep 2010 (20100910/ED)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2010  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2010

CAPLUS now includes complete International Patent Classification (IPC)  
reclassification data for the third quarter of 2010.

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<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

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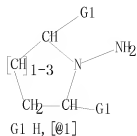
LI ANSWER 1 OF 1 REGISTRY COPYRIGHT 2010 ACS on STN  
RN 10599-90-3 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Chloramide (CA INDEX NAME)  
OTHER NAMES:  
CN Chloramine  
CN Chloramine (inorganic compound)  
CN Chloroamine  
CN ExoStop  
CN Monochloramine  
CN Monochloramine (NH<sub>2</sub>Cl)  
CN Monochloroamine  
CN Monochloroammonia  
MF Cl H2 N  
CI COM  
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BIOSIS, BIOTECHNO, CA, CAPLUS,  
CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU,  
DETERM\*, DRUGU, EMBASE, GMELIN\*, HSDB\*, IFICDB, IFIPAT, IFIUDB,  
MEDLINE, MSDS-OHS, PIRA, PROMT, RTECS\*, TOXCENTER, ULIDAT, USPAT2,  
USPATFULL, USPATOLD  
(\*File contains numerically searchable property data)  
Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)

Cl-NH<sub>2</sub>

**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

1865 REFERENCES IN FILE CA (1907 TO DATE)  
20 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
1867 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d 12  
 L2 HAS NO ANSWERS  
 L2 STR



Ak 1

Structure attributes must be viewed using STN Express query preparation.

=> log y

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SINCE FILE	TOTAL
ENTRY	SESSION

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